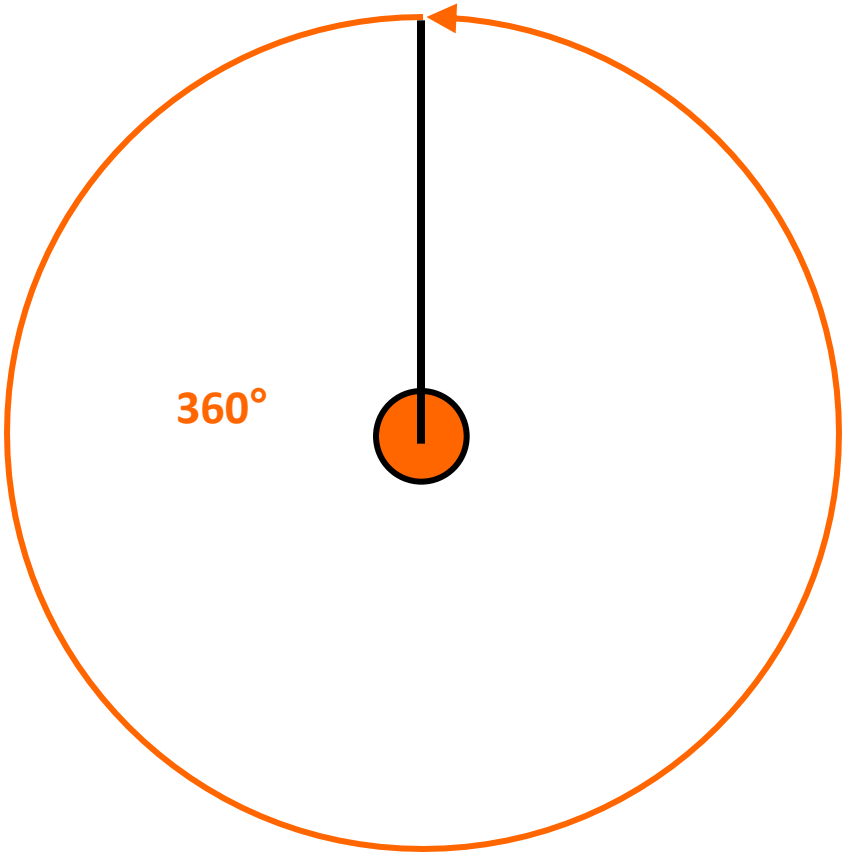
WALT: Calculate angles around a point

Angles

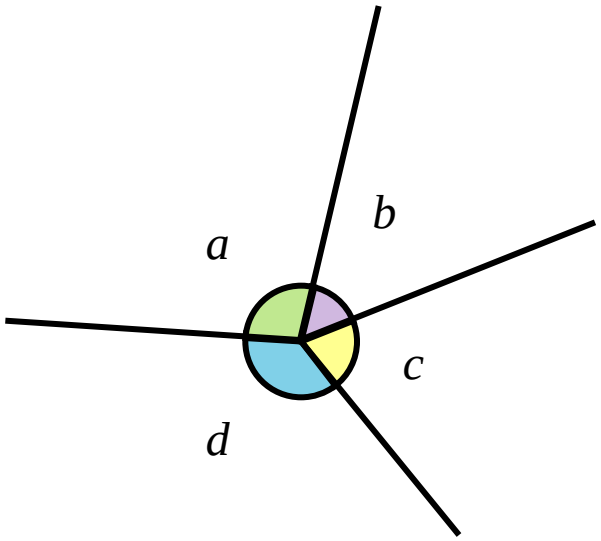
Angles are measured in **degrees**.



A full turn measures 360°.

Angles around a point

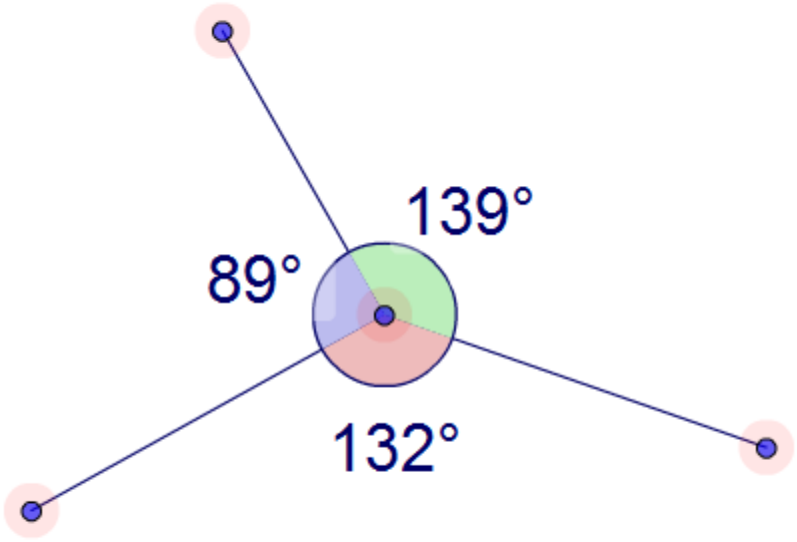
Angles around a point add up to 360°.



$a + b + c + d = 360°$

because there are 360° in a full turn.

Angles around a point



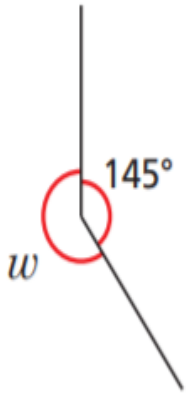
Calculating angles around a point

Use geometrical reasoning to find the size of the labelled angles.

Method: the total degrees around a point is 360°

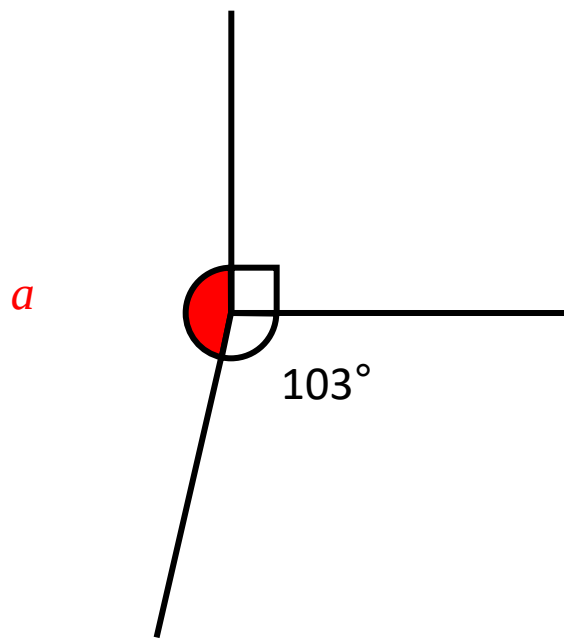
We can use this knowledge to help us work out missing angles by adding up the total of the angles we do know and then subtract this from 360.

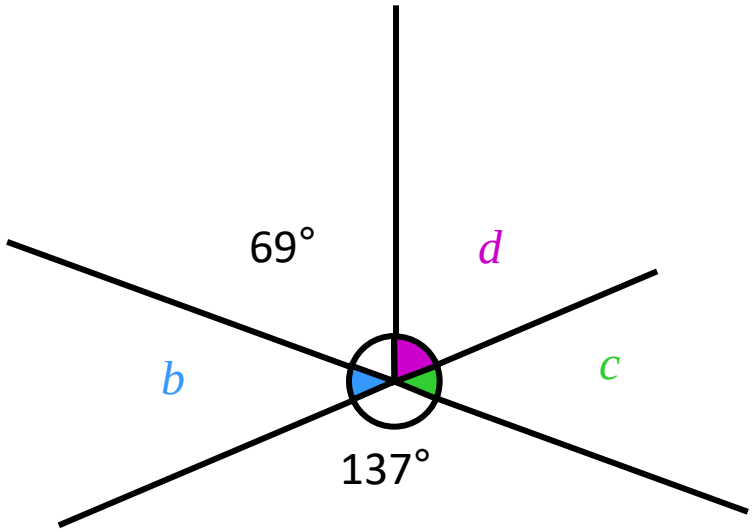
Therefore below we would subtract 145 from 360 to find the value of W
360 – 145 = 215°



Calculating angles around a point

Use geometrical reasoning to find the size of the labelled angles.



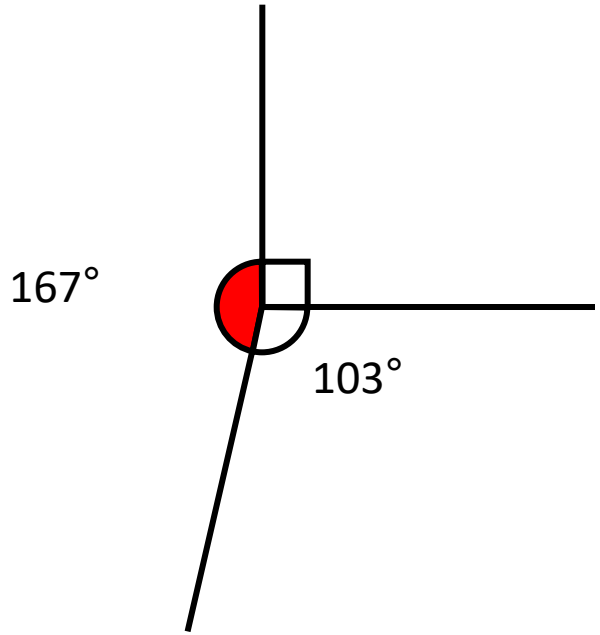


Calculating angles around a point

Use geometrical reasoning to find the size of the labelled angles.

Step 1 $103 + 90 = 193$

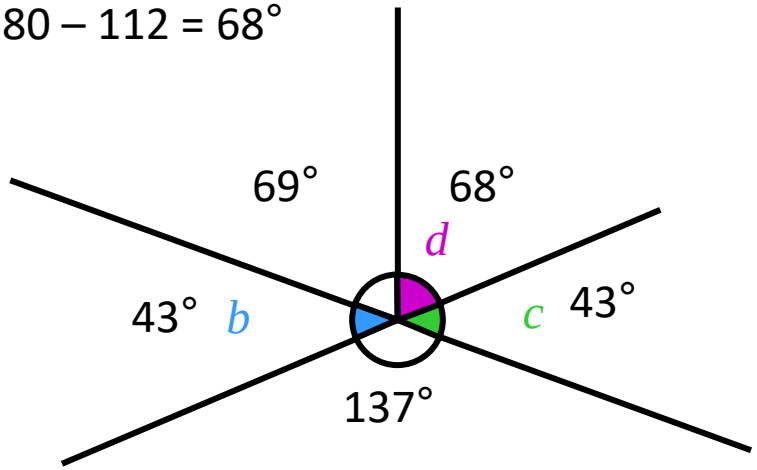
Step 2 $360 - 193 = 167°$



Step 1 (find c) $180 - 137 = 43°$

Step 2 (find b) opposite angles are equalso b must also be 43°

Step 3 (find d) use your angles on a straight line knowledge $43 + 69 + d = 180$
so $43 + 69 = 112$
$180 - 112 = 68°$



Calculating angles around a point

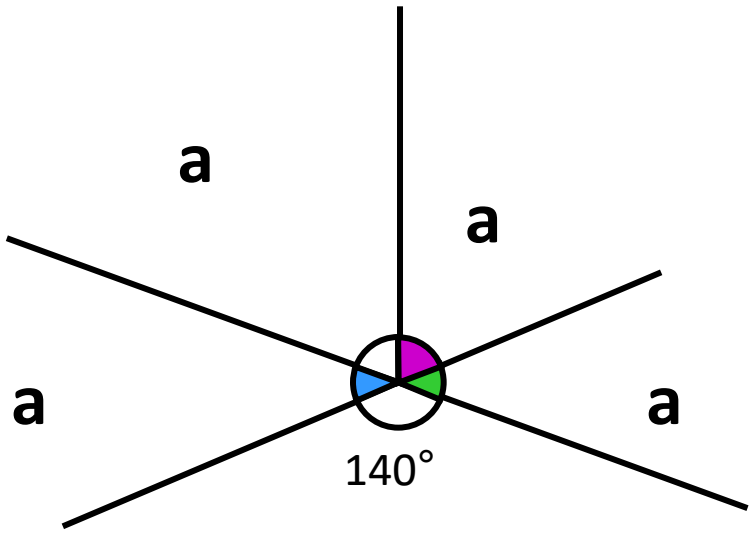
Use geometrical reasoning to find the size of a

$360^o - 140^o = 220^o$

$220^o \div 4$(lots of a)

=

$\underline{55^o}$

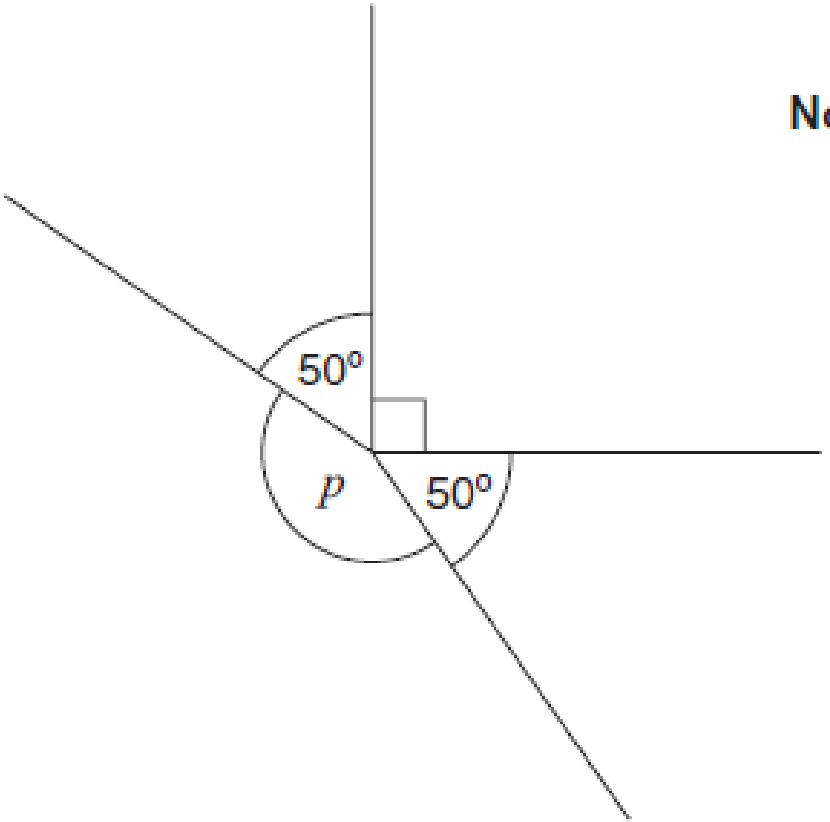


WALT: Calculate angles around a point

WILF:

- Accurate addition and subtraction
- Recognise that an angle with the same letter is the same size

Plenary: calculate angle *P*



Answer = 170°

50 + 50 + 90 = 190
360 – 190 = 170

OR

360 – 50 – 50 – 90
= 170

Plenary: calculate angle *P*